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EXAMINER	
ABDALLA, KHALID M	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/583,668	SCHELEN ET AL.	
	Examiner	Art Unit	
	KHALID ABDALLA	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☒ Claim(s) *1-8 and 10-15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/13/2009 and 06/21/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show what the components are as described in the specification. Regarding Figure 1,102 should be described as network resource manager; 104 , 106 and 110 should be described as a measurement manager ,measurement engines and routers. Similar corrections need to be done to the entire figure . Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121 (d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121 (d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121 (d) (1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Objections

3. Claim 1-8 and 10-15 are objected to under 37 CFR 1.75(c) because of the following informalities:

Regarding claims 1, the word " Method " in line 1 . suggested to change to " A method "

Regarding claims 2, the word " Method " in line 1 seems to refer back to the word " Method " in claim 1 line 1.If this is true it's suggested to change the word " Method " to " The method ". Similar correction needs to be done to claims 3-8 and 10-15 lines 1 .

Claim Rejections - 35 USC § 112

4. Claim1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation " ….the forwarding quality …" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Regarding claims 2-15 these claims are rejected since they depend on claim1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-8 and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maltz et al (US 20020143929 A1) in view of Bearden et al (US 20030086425 A1).

Regarding claim1 Maltz et al et al discloses Method for controlling the forwarding quality in a data network (FIG. 1 is an illustration of a computer network 100 of a preferred embodiment comprising a plurality (here, seven) of locations 110, which are also known as Points of Presence (POPs) or nodes, each comprising at least one network element. As used herein, the term "network element" is intended to broadly refer to any device that connects to one or more network elements and is capable of controlling the flow of data through the device see [0029] lines 1-9), the method comprising: c

performing, by a measurement manager (Fig. 1 shows Traffic management system TMS 120), end-to-end measurements between nodes in said data network (Fig. 1 shows data network), the end-to-end measurements providing timing information of traffic flowing between the nodes in said data network;

obtaining by a Network Resource Manager (NRM) (Fig.2 shows operator's network

210) , information of the network topology (Turning again to the drawings, FIG. 2 is a block diagram of one presently preferred embodiment

of the traffic management system (TMS). In this preferred embodiment, the traffic management system comprises a TMS Algorithm 200. The TMS Algorithm 200, which can be implemented with hardware and/or software, receives inputs that represent the traffic demand on the network 210. With these inputs and with knowledge of network topology and policy information, the TMS Algorithm 200 outputs network element configurations to automatically direct data based on the traffic demand. For example, the TMS can collect traffic information from all edge routers and switches in the network 210 see[0033] lines 1-12)

transferring the obtained information of the network topology from the NRM to the measurement manager (Fig. 1 shows Traffic management system TMS 120) or transferring a result of the performed end-to-end measurements from the measurement manager to the NRM (As described above, one feature of this system is the real-time feedback loop. Measurements/statistics collected from the network (in addition to specific SLAs or requests from users) are repeatedly analyzed by the TMS Algorithm 320, which then adjusts the network configuration. The actual running of the TMS Algorithm 320 can be periodic (as shown in FIG. 4), or it can be event driven (e.g., when a new SLA is added to the system)see [0038-lines 1-8)

combining said end-to-end measurements and said obtained information of the network topology into a first information set (With these inputs and with knowledge of network topology and policy information, the TMS Algorithm 200 outputs network

element configurations to automatically direct data based on the traffic demand see [0033] lines 6-8) ; and

Maltz et al does not disclose detecting correlate d and uncorrelated paths using the first information set .Bearden et al from the same or similar endeavor teach

(It also proves advantageous in illustrative embodiments of the present invention to monitor load and utilization of network elements routing voice packets. Such monitoring and QoS measurements for injected voice traffic yield QoS results as a function of use and load on the network elements that are on call paths. More specifically, it proves advantageous in accordance with an aspect of the present invention to relate network load on call paths to voice quality parameters to identify problems in the network that are likely to prevent an acceptable VoIP implementation see [0056] lines 1-12) also see (Thus, the above three phases indicate a framework for providing tools

that facilitate the assessment of IP telephony readiness of a network. As seen above, this framework includes first determining the topology of the network including determining the exact path between two endpoints in the network. Then network device monitoring and injection of synthesized calls occur concurrently. Network devices are polled frequently, such as every 10 or 60 seconds and the topology and monitoring and call QoS measurements are collected in the data store. The monitoring and end-to-end call QoS statistics are time stamped to allow matching in the analysis see [0259] lines 1-12)

Thus it would have been obvious to one of ordinary skill in the art to implement the method of Bearden et al in the system of Maltz et al The method of Maltz et al can be implemented on any type of method detecting correlate d and uncorrelated paths using the first information set with a motivation in order to provide efficiently monitor, analyze and reporting , display and visualization of operations in data networks.

Regarding claim2 note that Maltz et al discloses Method, comprising the further step of:

combining said first information set (With these inputs and with knowledge of network topology and policy information, the TMS Algorithm 200 outputs network element configurations to automatically direct data based on the traffic demand see [0033] lines 6-8) with information on data flow presence

at individual out-interfaces (Traffic demands can be determined by observations of existing traffic patterns and/or by explicit user requests to the network via a User-Network-Interface (UNI) (e.g., Optical Network Interface, OIF 2000.125). Traffic demands can also be determined by predicting future traffic patterns based on observed traffic patterns or on notification of traffic demands via a policy system such as the Common Object Policy Service (COPS). One or more ways of determining traffic demands can be used. Although not required, the traffic management system can monitor the traffic patterns in the automatically-provisioned path and automatically provision yet another path based on the monitored traffic demands. This provides a feedback functionality that repeatedly and dynamically provisions paths in the network see [0031] lines 11-24).

Regarding claim3 note that Maltz et al discloses Method, comprising the further step of:

scheduling the transfer of the obtained information of the network topology over time or initiating the transfer of the obtained information of the network topology periodically (After the TMS Statistics Collection Server collects information from network elements, the TMS Statistics Collection Server can filter, compress, and/or aggregate the information before it is transferred over the network or a separate management network to a TMS Statistics Repository at the convenience of the network operator. Specifically, such transfers can be scheduled when the traffic load on the network is fairly light so that the transfer of the information will not impact the performance seen by users of the networks. These transfer times can be set manually or chosen automatically by the TMS Statistics Collection Server to occur at times when the measured traffic is less than the mean traffic level sees [0073] lines 8-20)

Regarding claim4 note that Maltz et al discloses Method, comprising the further step of:

scheduling the transfer of the result of the performed end-to-end measurements over time or initiating the transfer of the result of the performed end-to-end measurements periodically (the processor can summarize historical statistics, such as calculating means, variances, or trends), statistics synthesis (the processor can calculate the values for some statistics the network element does not measure by mathematical combination of values that it does; for example, link utilization can be calculated by measuring the number of bytes that flow out a line card interface each second and

dividing by the total number of bytes the link can transmit in a second), missing value calculation (if the network element is unable to provide the value of a statistic for some measurement period, the processor can fill in a value for the missing statistic by reusing the value from a previous measurement period), and scheduling (the processor can schedule when statistics should be collected from the network elements and when the resulting information should be transmitted to the remote storage) see [0068]).

Regarding claim5 note that Maltz et al discloses Method, comprising the further step of:

requesting the transfer of the obtained information of the network topology explicitly by a master manager (network 210 OF FIG. 2) (Turning again to the drawings, FIG. 2 is a block diagram of one presently preferred embodiment of the traffic management system (TMS). In this preferred embodiment, the traffic management system comprises a TMS Algorithm 200. The TMS Algorithm 200, which can be implemented with hardware and/or software, receives inputs that represent the traffic demand on the network 210. With these inputs and with knowledge of network topology and policy information, the TMS Algorithm 200 outputs network element configurations to automatically direct data based on the traffic demand. For example, the TMS can collect traffic information from all edge routers and switches in the network 210 see[0033] lines 1-12)

Regarding claim 6 note that Maltz et al Method, comprising the further step of:

requesting the transfer of the result of the performed end-to-end measurements explicitly by a master manager (network 210 OF FIG. 2) (Turning again to the

drawings, FIG. 2 is a block diagram of one presently preferred embodiment of the traffic management system (TMS). In this preferred embodiment, the traffic management system comprises a TMS Algorithm 200. The TMS Algorithm 200, which can be implemented with hardware and/or software, receives inputs that represent the traffic demand on the network 210. With these inputs and with knowledge of network topology and policy information, the TMS Algorithm 200 outputs network element configurations to automatically direct data based on the traffic demand. For example, the TMS can collect traffic information from all edge routers and switches in the network 210 see[0033] lines 1-12)

Regarding claim 7 note that Maltz et al Method, comprising the further step of: triggering the transfer of the obtained information of the network topology by specific events in a slave manager (TMS Algorithm 320 of fig. 3) (Measurements/statistics collected from the network (in addition to specific SLAs or requests from users) are repeatedly analyzed by the TMS Algorithm 320, which then adjusts the network configuration. The actual running of the TMS Algorithm 320 can be periodic (as shown in FIG. 4), or it can be event driven (e.g., when a new SLA is added to the system) see [0038] lines 2-6)

Regarding claim 8 note that Maltz et al Method, comprising the further step of: triggering the transfer of the result of the performed end-to-end measurements by specific events in a slave manager (the TMS creates paths suitable for use as primary paths.An additional concern for some carriers is the provision of protection paths for some or all of the traffic on their network. As part of requesting service from the

carrier, some customers may request that alternate secondary paths through the network be pre-arranged to reduce the loss of data in the event any equipment along the primary path fails see [0065] lines1-6)

Regarding claim10 note that Maltz et al discloses Method, comprising the further step of:

scheduling the transfer of the obtained information of the network topology over time or initiating the transfer of the obtained information of the network topology periodically (After the TMS Statistics Collection Server collects information from network elements, the TMS Statistics Collection Server can filter, compress, and/or aggregate the information before it is transferred over the network or a separate management network to a TMS Statistics Repository at the convenience of the network operator. Specifically, such transfers can be scheduled when the traffic load on the network is fairly light so that the transfer of the information will not impact the performance seen by users of the networks. These transfer times can be set manually or chosen automatically by the TMS Statistics Collection Server to occur at times when the measured traffic is less than the mean traffic level sees [0073] lines 8-20)

Regarding claim11 note that Maltz et al discloses Method, comprising the further step of:

scheduling the transfer of the result of the performed end-to-end measurements over time or initiating the transfer of the result of the performed end-to-end measurements periodically (the processor can summarize historical statistics, such as calculating means, variances, or trends), statistics synthesis (the processor can calculate the

values for some statistics the network element does not measure by mathematical combination of values that it does; for example, link utilization can be calculated by measuring the number of bytes that flow out a line card interface each second and dividing by the total number of bytes the link can transmit in a second), missing value calculation (if the network element is unable to provide the value of a statistic for some measurement period, the processor can fill in a value for the missing statistic by reusing the value from a previous measurement period), and scheduling (the processor can schedule when statistics should be collected from the network elements and when the resulting information should be transmitted to the remote storage) see [0068]).

Regarding claim12 note that Maltz et al discloses method, comprising the further step of:

requesting the transfer of the obtained information of the network topology explicitly by a master manager (network 210 OF FIG. 2) (Turning again to the drawings, FIG. 2 is a block diagram of one presently preferred embodiment of the traffic management system (TMS). In this preferred embodiment, the traffic management system comprises a TMS Algorithm 200. The TMS Algorithm 200, which can be implemented with hardware and/or software, receives inputs that represent the traffic demand on the network 210. With these inputs and with knowledge of network topology and policy information, the TMS Algorithm 200 outputs network element configurations to automatically direct data based on the traffic demand. For example, the TMS can collect traffic information from all edge routers and switches in the network 210 see[0033] lines 1-12)

Regarding claim 13 note that Maltz et al Method, comprising the further step of: requesting the transfer of the result of the performed end-to-end measurements explicitly by a master manager (network 210 OF FIG. 2) (Turning again to the drawings, FIG. 2 is a block diagram of one presently preferred embodiment of the traffic management system (TMS). In this preferred embodiment, the traffic management system comprises a TMS Algorithm 200. The TMS Algorithm 200, which can be implemented with hardware and/or software, receives inputs that represent the traffic demand on the network 210. With these inputs and with knowledge of network topology and policy information, the TMS Algorithm 200 outputs network element configurations to automatically direct data based on the traffic demand. For example, the TMS can collect traffic information from all edge routers and switches in the network 210 see[0033] lines 1-12)

Regarding claim 14 note that Maltz et al Method, comprising the further step of: triggering the transfer of the obtained information of the network topology by specific events in a slave manager (TMS Algorithm 320 of fig. 3) (Measurements/statistics collected from the network (in addition to specific SLAs or requests from users) are repeatedly analyzed by the TMS Algorithm 320, which then adjusts the network configuration. The actual running of the TMS Algorithm 320 can be periodic (as shown in FIG. 4), or it can be event driven (e.g., when a new SLA is added to the system) see [0038] lines 2-6)

Regarding claim 15 note that Maltz et al Method, comprising the further step of: triggering the transfer of the result of the performed end-to-end measurements by

specific events in a slave manager (the TMS creates paths suitable for use as primary paths.An additional concern for some carriers is the provision of protection paths for some or all of the traffic on their network. As part of requesting service from the carrier, some customers may request that alternate secondary paths through the network be pre-arranged to reduce the loss of data in the event any equipment along the primary path fails see [0065] lines1-6) .

7. Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maltz et al (US 20020143929 A1) in view of Bearden et al (US 20030086425 A1) as applied in claim1 above and further in view of Mayton et al (US-PAT-NO: 6763380).

Regarding claim9 Maltz et al and Bearden et al does not disclose a computer program product for performing the steps of claim 1, the computer program product having a compute-readable storage medium with a computer program embodied thereon. Mayton et al from the same or similar endeavor teach (the present invention may take the form of a computer program product on a computer-readable storage medium having computer-readable program code means embodied in the medium. Any suitable computer readable medium may be utilized including semiconductor devices, hard disks, CD-ROMs, optical storage devices, or magnetic storage Devices see coln:5 lines 12-17) . Thus it would have been obvious to one of ordinary skill in the art to implement the method of Mayton et al in the system of Maltz et al and Bearden et al The method of Maltz et al and Bearden et al can be implemented on any type of method a computer program product for performing the steps of claim 1, the computer

program product having a compute-readable storage medium with a computer program embodied thereon which is taught by Mayton with a motivation in order to provide efficiently monitor, analyze and reporting , display and visualization of operations in data networks that can take the form of a computer program product on a computer-readable storage medium having computer-readable program code means embodied in the medium.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(US 20030046388 A1), (Milliken) discloses, system and method for network performance measurement using packet signature collection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHALID ABDALLA whose telephone number is (571)270-7526. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on 571-272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KHALID ABDALLA/

Examiner, Art Unit 2419

/DANG T TON/

Supervisory Patent Examiner, Art Unit 2419/D. T. T./

Supervisory Patent Examiner, Art Unit 2419